

24656

S/076/61/035/006/008/013
B110/B220

Separation of boron...

CA 2 (SD-2) synchronous motor, PKC (RKS) relay; 4 imp/min. The optimum flow velocity was 2 ml/min. The electronic pulse transmitter with, Δ ru-26 (DGTs-26) rectifier, Cr2C (SG2S) tube, PCM-1 (RSM-1) and PH-90 (RN-90) relays gave a large number of pulses (3-30 imp/min) with low consumption of liquid. The complex was decomposed in the glass-packed desorber 18 (length = 50 cm, interior diameter = 20 mm) which was heated by warm oil from the TC-24 (TS-24) thermostat 19. BF_3 passed through the return condenser 44 into column 41. The anisole contaminated by resin entered the evaporator 21. It flowed through the inner tube and then over the glass beads, where it was evaporated. The resin was evacuated by 20. 21, 22, and 23 were it was heated by a nichrome coil. The anisole vapors passed into the columns 22 and 23 consisting of 3 glass tubes telescoped into each other. Anisole vapors passed through the inner tube (diameter = 1 cm), the nichrome spiral was wound around the intermediate (diameter = 2 cm), the outer (diameter = 4 cm) served as heat insulation. The temperature of the column was regulated by means of a rheostat and controlled with a Cr-Al thermocouple. Anisole for spraying the absorber 26 packed with glass rings was supplied by the cooler 24. 25 served for evacuating the CH_3F presumably formed. The complex subject to isotopic exchange in

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Separation of boron...

with constant velocity into the desorber heated to $\sim 150^{\circ}\text{C}$ by anisole. From 2 BF_3 enters the bottom part of column 3, the liquid anisole passing the pump system 6 enters the absorber 4, where also BF_3 enters after having passed the column. Here, the complex compound BF_3 -anisole is formed again. Samples were taken periodically by means of 5. By means of 4, 5, 8 (Fig.2) 6 l. anisole were filled into the 15 l. glass vessel 1. The electromagnetic (EMIB) agitator 2 was started and then BF_3 introduced. The water cooling of absorber 26 and coolers 14, 24, 44 was put into operation, the thermostats 19, 42 connected and the temperature of column 41 and desorber 18 adjusted. The boron complex passed through a rubber bulb and 10 into the siphon preceding the dosing device 12-17. By means of electromagnetic and impulse transmitter a copperplated iron bar fitted in the glass tube 12 was moved up and down rhythmically as desired (2-12 imp/min). Then the complex passes the water-cooled elbow 14, the buffer vessel 15 filled with a glass spiral, and the dropper 16 and enters the desorber 18. The best results were obtained with the mechanical pulse transmitter with,

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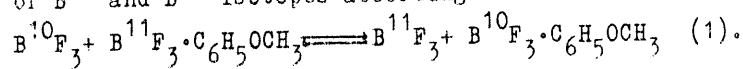
S/076/61/035/006/008/013
B110/B22021.2400

AUTHORS: Panchenkov, G. M., Makarov, A. V., and Romanov, G. V. (Moscow)

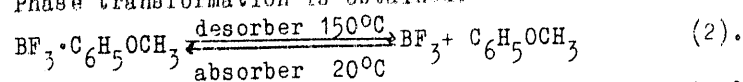
TITLE: Separation of boron isotopes by the chemical exchange method.
III. Production of $B^{11}F_3$ concentrate

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 6, 1961, 1315 - 1320

TEXT: Since the effective capture cross section of thermal neutrons amounts to 0.05 barn for B^{11} , it may be used in form of zirconium and yttrium boride, etc. as heat-resisting material in reactor construction. The present paper deals with a chemical exchange method for the separation of B^{10} and B^{11} isotopes according to:

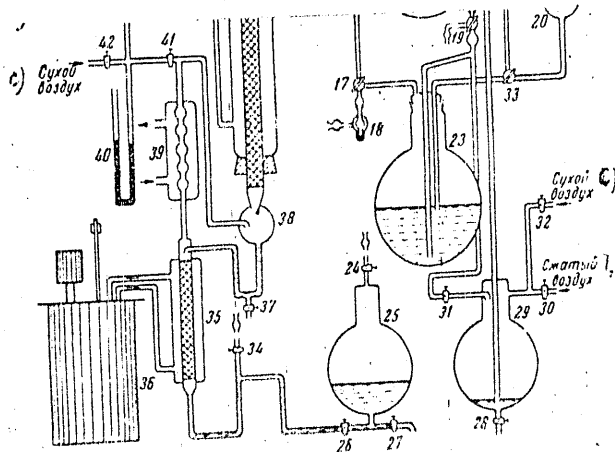


Phase transformation is obtained:

The liquid $BF_3 \cdot C_6H_5OCH_3$ passes from the "infinitely large" tank 1 (Fig. 1)

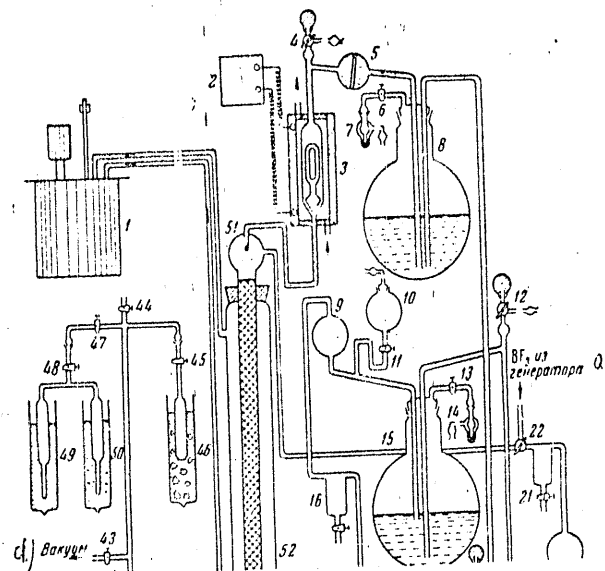
Card 1/9

S/076/60/034/011/011/024
B004/B064



Card 6/6

S/076/60/034/011/011/024
B004/B064



Card 5/6

Separation of Boron Isotopes by Chemical
Exchange. II. The Complex Compound of Boron
Trifluoride With β, β' -Dichloro Diethyl
Ether (Chlorex) S/076/60/034/011/011/024
B004/B064

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: February 14, 1959

Legend to Fig. 1 1: thermostat TC-15 (TS-15); 2: time relay; 3: electro-
magnetic flow regulator; 4,12,17,19,22,23: three-way stop cocks; 5: filter;
6,11,13,24,26-28,30-32,34,41-45,47,48: two-way stop cocks; 7,14,18: mercury
seals; 8,15,23: vessels for the complex; 9,20: safety balls; 10: funnel;
16,21: safety glasses; 25: vessel for Chlorex; 29: intermediate vessel for
the lifting of the complex; 35: desorber; 36: TC-24 (TS-24) thermostat;
37: test stop cock; 38,51: droppers; 39: condenser; 40: mercury gauge;
46: test glass; 49,50: ampoules; 52: column. a) BF_3 from the generator;
b) compressed air; c) dry air; d) vacuum.

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Separation of Boron Isotopes by Chemical
Exchange. II. The Complex Compound of Boron
Trifluoride With β, β' -Dichloro Diethyl
Ether (Chlorex)

S/076/60/034/011/011/024
B004/B064

dropper 38. The column is in a thermostat whose temperature is varied between 20 - 60°C. After having passed through the column, the complex is heated to 175°C in the desorber 35 filled with glass pipe pieces and heated with the oil of thermostat 36. The liberated BF_3 is conveyed back into the column through the reflux condenser 39, and Chlorex is collected in vessel 25. BF_3 samples are taken in a complex form through stop cock 37 and as a gas through cock 41, Chlorex being frozen out in test glass 46 by an acetone-ice mixture. The isotopic analysis was made with an M(-3) (MS-3) mass spectrometer on the basis of the peaks 10 and 11. The following results were obtained: In the exchange reaction between BF_3 and Chlorex, an isotopic separation occurs, B^{10} concentrating in the liquid phase. The separation factor increases from 20 to 60°C when the temperature of the column rises, and amounts to 1.015 ± 0.005 at 60°C. S. I. Babkov and N. M. Zhavoronkov are mentioned. There are 3 figures and 17 references: 5 Soviet, 5 US, 1 British, 2 Dutch, 2 French, 1 Swedish, and 1 Swiss.

Card 3/6

Separation of Boron Isotopes by Chemical
Exchange. II. The Complex Compound of Boron
Trifluoride With β, β' -Dichloro Diethyl
Ether (Chlorex)

S/076/60/034/011/011/024
B004/B064

conveyed into the lower vessel 23 through the stop cocks 12 and 33 by means of a rubber ball, and 15 is filled again with 6 l of Chlorex. The BF_3 formed in the generator is conveyed into the vessel 23 through the stop cocks 22 and 33, and after saturation of the Chlorex contained therein, it is passed into the vessel through stop cock 17. Stop cocks 16 and 21, and balls 9 and 20 prevent Chlorex from being sucked opposite to the flow direction of BF_3 . A complete and a partially saturated complex $\text{BF}_3(\text{C}_2\text{H}_4\text{Cl})_2\text{O}$ are obtained in vessel 23 and 15, respectively. From 23 the complex is sucked into the vessel 29 by the rubber ball and the stop cocks 19 and 31; then, it is lifted into vessel 8 by compressed air. The half-saturated complex 15 is passed into vessel 23, and 15 is filled with fresh Chlorex. From vessel 8 the complex is sucked into the electromagnetic regulator 3 through glass filter 5 and stop cock 8; the regulator is controlled by the time relays 2. Regulator and magnetic coil are water- and air-cooled since otherwise the complex would decompose. The flow rate through the column filled with passivated nichrome is controlled by

Card 2/6

S/076/60/034/011/011/024
B004/B064

AUTHORS: Panchenkov, G. M., Makarov, A. V., and Pechalin, L. I.
(Moscow)

TITLE: Separation of Boron Isotopes by Chemical Exchange. II. The
Complex Compound of Boron Trifluoride With β, β' -Dichloro
Diethyl Ether (Chlorex)

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 11,
pp. 2489-2494

TEXT: This paper deals with the exchange of the boron isotopes between
 BF_3 and its complex with Chlorex. The following reaction equation is
written: $\text{B}^{10}\text{F}_3 + \text{B}^{11}\text{F}_3(\text{C}_2\text{H}_4\text{Cl})_2\text{O} \rightleftharpoons \text{B}^{11}\text{F}_3 + \text{B}^{10}\text{F}_3(\text{C}_2\text{H}_4\text{Cl})_2\text{O}$ (1). BF_3 was
prepared by the reaction $6\text{NH}_4\text{BF}_4 + \text{B}_2\text{O}_3 + 6\text{H}_2\text{SO}_4 = 8\text{BF}_3 + 6\text{NH}_4\text{HSO}_4 + 3\text{H}_2\text{O}$ (2) in
an apparatus described in Ref. 5. A new apparatus (Fig. 1) was used to
separate the boron isotopes. The process is described. 6 l of Chlorex are
poured into the vessel 15 through the funnel 10 and the stop cock 11,
Card 1/6

The Solubility of Boron Trifluoride in Anisol
Phenetol, β,β' -Dichlorodiethyl Ether (Chlorex),
and Sulfuric Acid

69138
S/076/60/034/03/023/038
B005/B016

5 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 20, 1958

Card 3/3

69138

The Solubility of Boron Trifluoride in Anisol,
Phenetol, β, β' -Dichlorodiethyl Ether (Chlorex), and
Sulfuric Acid

S/076/60/034/03/023/038
B005/B016

ings on the two gasometers(II) and (IV). The operation described is repeated until the readings on both gasometers show the same value which corresponds to the saturation of the solvent investigated with BF_3 at the given temperature. The absorption vessel (III) containing the resultant complex solution is then connected with gasometer (IV). The portion of boron trifluoride escaping from the reaction vessel (III) at a temperature rise is measured. Temperature usually rises to the boiling point of the respective solvent. The experimental performance of the above-described procedure is given in detail with the aid of figure 1. The method described is accurate to within $\pm 5\%$. A table shows the solubilities of boron trifluoride in anisol, phenetol, chlorex, and sulfuric acid at $5 - 7^\circ\text{C}$ as determined in this way. The following solubilities ($\text{cm}^3 \text{BF}_3$ per cm^3 solvent) were found: anisol - 230, phenetol - 196, chlorex - 201, sulfuric acid - 120. Of the four resultant complexes the complex formed BF_3 and chlorex has the highest thermal stability while the complex formed with anisol has the lowest stability. Figure 2 graphically illustrates the temperature dependence of the solubilities of boron trifluoride in the 4 solvents mentioned in the range $0-170^\circ\text{C}$. A TS-15 water thermostat and a TS-24 oil thermostat were used to adjust the various temperatures. The Mendeleev-Clapeyron equation is mentioned in the paper under review. There are 2 figures, 1 table, and

Card 2/3

11-5800
5.4/20
AUTHORS:

Makarov, A. V., Panchenkov, G. M.
(Moscow)

69138
S/076/60/034/03/023/038
B005/B016

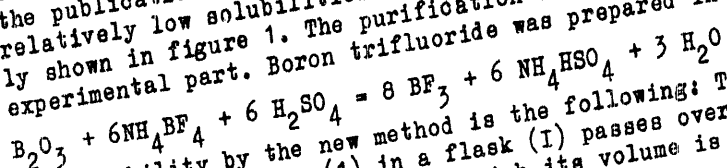
TITLE:

The Solubility of Boron Trifluoride in Anisol, Phenetol, β, β' -Dichlorodiethyl Ether (Chlorex), and Sulfuric Acid

PERIODICAL:

Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 3, pp 639-643 (USSR)

TEXT: The authors devised a new method for investigating the solubility of boron trifluoride in the solvents mentioned in the title, since the apparatus used in the publications mentioned in references 4 and 5 are only usable for determining relatively low solubilities of BF_3 . The new experimental device is schematically shown in figure 1. The purification of the reagents used is described in an experimental part. Boron trifluoride was prepared in the following reaction:



The principle of studying solubility by the new method is the following: The boron trifluoride formed according to reaction (1) in a flask (I) passes over two cooling traps directly into a gasometer device (II) in which its volume is measured. The BF_3 is then conveyed to an absorption vessel (III) which contains a certain quantity of the solvent to be investigated which is kept at constant temperature. The part of gas which is not absorbed gets into a further gasometer (IV) similar to gasometer (II). The quantity of BF_3 absorbed by the solvent results from the difference of read-

Card 1/3

Exchange Kinetics of Boron Isotopes Between
Boron Trifluoride and Its Anisol Complex

S/189/60/000/003/005/013/XX
B003/B067

of anisol saturated with BF_3 were mixed with measured amounts of gaseous BF_3 containing B^{10} by means of the ЭМНБ (EMIB) magnetic stirrer. The gas phase was again sucked off after 10, 36, 50, 78, and 130 minutes and studied by mass spectrography in a МС-3 (MS-3) apparatus. The experiments showed that under the conditions described the isotopic exchange is completed already after a short time and an isotopic equilibrium occurs. This is also shown in the diagram of Fig. 2 (dependence of the isotopic composition in BF_3 gas on the duration of reaction) which is a straight line parallel with the abscissa (time). There are 2 figures and 5 references: 3 Soviet and 2 US. ✓

ASSOCIATION: Moskovskiy universitet, Kafedra fizicheskoy khimii (Moscow
University, Chair of Physical Chemistry)

SUBMITTED: July 8, 1959

Card 2/2

S/189/60/000/003/005/013/XX
B003/B067

AUTHORS: Panchenkov, G. M., Makarov, A. V., Rozynov, B. V.

TITLE: Exchange Kinetics of Boron Isotopes Between Boron Trifluoride and Its Anisol Complex 19

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 2, khimiya, 1960, No. 3, pp. 7-10

TEXT: The authors state that their paper whose content corresponds to the publication by Palko A. A., Healy R. M., Landau L. J., Chem. Phys., 1958, 28, p. 214 was completed already in 1957, whereas the mentioned publication was issued only in 1958. They studied the heterogeneous exchange of the boron isotopes B^{10} in BF_3 (enriched to 83%) for a natural boron isotopic mixture contained in the BF_3 -anisol complex. The apparatus made of pyrex glass which was used for the investigation is schematically shown in Fig. 1 and fully described in the paper. The BF_3 used, was obtained from the reaction $C_6H_5N_2BF_2 \rightarrow C_6H_5F + N_2 + BF_3$. Measured amounts

Card 1/2

Separation of Boron Isotopes by the
Method of Chemical Exchange

S/189/60/000/002/001/008/XX
BO17/R067

complex. The results are reproduced in Fig. 3. The best separation coefficient obtained was 1.607. Also other complex compounds, e.g., those of boron tetrafluoride with phenetole, β, β' -dichloro-diethyl ester, etc., were suggested for the separation of boron isotopes by the chemical exchange method. The studies for the separation of boron isotopes by chemical exchange methods were begun in 1951; in 1954, the method described was patented. This paper was presented to the Uchenyy sovetskoye fakul'teta MGU (Scientific Council of the Chemical Department of Moscow State University) on October 29, 1958. The authors mention papers by V. D. Moiseyev, Yu. A. Lebedev, N. N. Sevryugova, O. V. Uvarov, N. M. Zhavoronkov, M. Ya. Kats, G. M. Kukavadze, and R. L. Serdyuk. There are 3 figures and 39 references: 15 Soviet, 8 US, 4 British, 1 Danish, 1 French, 6 Dutch, 2 German, 1 South African, 1 Swedish, and 1 Yugoslav. ✓

ASSOCIATION: Kafedra fizicheskoy khimii (Chair of Physical Chemistry)

SUBMITTED: January 6, 1959

Card 2/2

S/189/60/000/002/001/008/XX
B017/B067

AUTHORS: Panchenkov, G. M., Makarov, A. V., and Pechalin, L. I.

TITLE: Separation of Boron Isotopes by the Method of Chemical Exchange

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 2. khimiya, 1960. 15
No. 2, pp. 3 - 12

TEXT: Chemical exchange is a fundamental method of separating isotopes of light elements. Boron isotopes were separated with the aid of the interaction between boron tetrafluoride and the boron tetrafluoride anisole complex. The separating column is schematically shown in Fig.1. In this method, the B^{10} isotope is enriched in the liquid phase. Fig.2 schematically shows the working method. The isotope composition of the samples converted into boron tetrafluoride was determined by the mass spectrograph MC-3 (MS-3) with an accuracy of about 1%. In further experiments with the boron tetrafluoride anisole complex in the exchange column, the authors studied, above all, the dependence of the separation coefficient on temperature and the flow velocity of the solution of the

Card 1/2

MAKAROV, A. V., Card Chem Sci --- (diss) "Separation of boron isotopes by chemical exchange," Moscow, 1960, 10 pp, 200 cop. Sci Res Physico-Chemical Institute im L. Ya. Karpov) (KL, 42-60, 111)

SOV/76-32-11-28/32

On the Calculation of the Once-Through Coefficient of the Separation of
Isotopes for Equilibrium Processes

coefficient α coincides with the constant of the chemical equilibrium. The final equation obtained is:

$$\alpha = \frac{t}{t - 1 + \sqrt{\frac{x_0}{y_n}}}$$

x_0 = the initial content of isotopes in the first phase

y_n = the content of isotopes in the second phase after n separations

n = number of separation stages (repetitions of separation)

$t = \frac{L}{G}$, where L denotes the amount of the isotope mixture in the first phase, and G the amount of the isotope mixture till the separation process. There is 1 reference,

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Khimicheskiy fakul'tet
Card 2/3 (Moscow State University, Chemistry Department)

SOV/76-32-11-28/32

21(5)
 AUTHORS: Kuznetsova, Ye. M., Makarov, A. V., Panchenkov, G. M.

TITLE: On the Calculation of the Once-Through Coefficient of the Separation of Isotopes for Equilibrium Processes (O raschete odnokratnogo koefitsiyenta razdeleniya izotopov dlya ravnovesnykh protsessov)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 11, pp 2641-2643 (USSR)

ABSTRACT: The change of the isotope concentration in simple investigations is within the error limits of mass spectrometers. For this reason several tests must be carried out, i.e. the separation must be repeated to obtain the required accuracy. In the present paper a calculation method for the once-through separation coefficient is given for cases where the isotopes are separated according to the method of ion chromatography, a chemical exchange, a formation of a precipitation (according to the theorem by V. G. Khlopin), or according to other equilibrium methods. The authors proceeded from the assumption that the stoichiometric coefficients for the separation reaction are equal to unity. In this case the once-through

Card 1/3

The "Elektroverr" in Switzerland

72-2-14/20

600 - 700°. The width of the glass band on one of the machines is 2200 mm and on another 1600 mm. The thickness is 0.6 mm to 6 mm. With a thickness of 2 mm the velocity of glass stretching is 70 m, and at 0.6 mm it amounts to 250 m per hour. There is little waste and the quality of the glass is very high. The furnace produces 30 t per day, which amounts to 1.6 - 2.0 kWh current energy per 1 kg of glass. Work is carried out in shifts of 7 men each. There are 3 figures.

AVAILABLE: Library of Congress

Card 2/2

MAKAROV, A.V.

AUTHORS: Vargin, V.V., Makarov, A.V., Zhukovskiy, Ye.V., 72-2-14/20
Nychke, A.A.

TITLE: The "Elektroverr" in Switzerland (Zavod "Elektroverr" v Shveytsarii).

PERIODICAL: Steklo i Keramika, 1958. Nr 2, pp. 33-36 (USSR)

ABSTRACT: The electric continuous glass melting furnace is located on the second floor of the building and is used for the production of plate glass by the Furkeau method. Dimensions and shape are shown in fig. 1. At each side of the furnace there are 6 electrodes. With a melting surface of 26 m² the glass production output amounts to 1.2 t per m² daily. The composition of the glass is that usual for the Furkeau process (14,8% sodium oxide). The layer consists of 70% raw material and 30% scrap glass, and is conveyed mechanically to the furnace without interruption. The temperature regime in the smelting department of the furnace is controlled by means of a thermocouple (fig. 3). The temperature in this zone amounts to 1410°. Fig. 2 shows the burning of CO in CO₂ above the electrodes along the entire width of the furnace. In the case of normal operation the temperature in the machine chamber amounts to

Card 1/2

MAKAROV, A.Y.

7, Rmt

ON THE SEPARATION OF BORON ISOTOPES BY CHEMICAL EXCHANGE. G. M. Finkelman, V. D. Molodtsov, and A. Y. Makarov (Leningrad Moscow State Univ.). Doklady Akad. Nauk S.S.S.R. 1:1, 419-4 (1947) Ref. 1. (In Russian)

Descriptions are given of B isotope separation by chemical exchange based on the reaction of $B^{10}F_3 + A \rightleftharpoons B^{11}F_3 + A$, where A is the anisole $C_6H_5OCH_3$, and $A \cdot BF_3$ is the liquid complex compound of anisole with boron fluoride. It has been shown that the isotope exchange reaction, as shown above, really exists with the equilibrium constant $\alpha = 1.013 \pm 0.006$ and the isotope B^{10} concentrated in the anisole-fluorine boron complex, i.e. in the liquid

phase. Results of the experiments are shown in tabular and graphical forms. (R.V.V.)

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ILLEGIBLE

1ST AND 2ND GROUPS										3RD AND 4TH GROUPS									
COMMON ELEMENTS										TRANSITION AND POST-TRANSITION									
<p>BC</p> <p>Determination of the thermoelectric homogeneity of a platinum wire. A. V. MAKAROV and I. V. PLASTININ (J. Tech. Phys. U.S.S.R., 1934, 4, 1195-1203).—An electric furnace for heating small lengths of the wire is described. Ch. Ans. (e)</p>										<p>B-I-6</p>									
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>1ST AND 2ND GROUPS</p>									
<p>3RD AND 4TH GROUPS</p>										<p>5TH AND 6TH GROUPS</p>									

MEYANOV, A.V., tech.; MEYANOV, G.T., 1944.

Transit chips for the Dravko. Safestronic 21 pp. 7 & 7
71 100. (TYPE 31:01)

(Danube Div. - how many boats)

MAKAROV, A.V. (st.Petushki Moskovsko-Kurskoy-Donbasskoy zh.d.)

Method of conducting examinations with the use of models. Mat. 7
shkole no.6:45-46 N-D '59 (MIRA 13:3)
(Geometry--Study and teaching)

KAZ'MIN, N.T.; MAKAROV, A.V.

Choosing the type of a sizing machine for the cotton industry.
Tekst.prom. 15 no.6:27-28 Je '55. (MIRA 8:7)
(Sizing (Textile)) (Textile machinery)

MAKAROV, A. V.

KAZMIN, N.T.; ZHIVOV, K.I.; MAKAROV, A.V., retsenzent; KUPRIYANOV, F.S.,
retsenzent.

[Knotting machines in the weaving industry] Uzloviazal'nye ma-
shiny tkatskogo proizvodstva. Moskva, Gos. nauchno-tekhn. izd-
vo Ministerstva promyshlennykh tovarov shirokogo potrebleniia,
SSSR, 1953. 76 p. (MLRA 7:8)
(Textile machinery)

MAKAROV, A.T., inzh.

Hoisting structure for use in the reconstruction of the sprinkler
of a cooling tower. Elek. sta. 35 no.7:78 J1 '64. (MIRA 17:11)

RUBASPKIN, A.S., zh.; TSEYTLIN, R.A., inzh.; MAKAROV, A.S.,
inzh.; KOPEYKINA, L.V., red.

[Methods for adjusting the automatic control systems of
once-through type boilers] Metodika naladki sistem avto-
maticheskogo regulirovaniia priamotochnykh kotlov. Mo-
skva, Izd-vo "Energiia," 1964. 110 p. (MIKA 17:6)

1. ORGRES, Trust, Moscow.

USSR/Diseases of Farm Animals. Diseases Caused by Helminths

R

Doc Jour : Ref Zhur - Biol., No 19, 1956, No 00250

complicated by organic or diffuse tissue necrosis. The outcome of purulent forms may be fistula development, or recovery with defective phenomena being retained. In empyemal forms with tissue necrosis, however, the outcome is intoxication, sepsis, and death of the sick animal. -- A.D.
Pasin

Cont : 2/2

MAKAROV, A.S.

USSR Diseases of Farm Animals. Diseases Caused by Microbi

R

Res Jour : Ref Zhur - Biol., No 10, 1958, No 86299

Author : Makarov A.S.

Inst : Kozlov Veterinary Institute

Title : The Problem of Orchestreosis of Withers in Horses, Its Clinical Forms and Outcome

Orig Pub : Uch. zap. Kazansk. vet. Inst., 1957, 65, 255-265

Abstract : The author investigated aseptic and purulent orchestreosis (O). Aseptic O may take a course which produces symptoms, as well as a course which does not produce symptoms. Such forms of the disease which do not produce symptoms terminate in the animal's death and in resorption of parasites, or in petrification of foci within injured tissues. In not working horses, asymptomatic forms may end in turgidity and, in working horses, in purulent O becoming apparent. Purulent O may take a course of non-microbic empyema or infectious empyema which is caused by microorganisms and which becomes

Card : 1/2

MARKOV, A. S.

Zootechnical work of the Pyatigorsk hatchery. Moscow, Gos. izd-vo sel'moz, lit-ry
1954. 12 p. (Biblioteka obshchego poznavaniya i kul'turno-razvicheskoy literatury)

1A

1. Poultry - Russia

MAKAROV, A. S.

Poultry - Goriachevodskie District

Progressive practice of Goriachevodskie poultry raisers. Sots. zhiv. 34 no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCL/CONFIDENTIAL.

MAKAROV, A. S.

Poultry

Organization of labor in collective farm poultry sections. *Sots. zhiv.*, 14, No. 7, 1954.

9. Monthly List of Russian Accessions, Library of Congress, December 1953, Uncl.
52

KOLBASOVA, V.K.; LYAMINA, V.P., starshiy nauchnyy sotrud.; MAKAROV, A.S.;
SHEPELEVA, N.A., starshiy nauchnyy sotrud.; SHEPINDER, M.A.,
kand. ekon. nauk, red.; BELOV, M., red.; TROPINOVA, Z., tekhn.red.

[Workers' control and nationalization of the industry in the Kostroma Government; collection of documents, 1917-1919] Rabochii kontrol' i natsionalizatsiia promyshlennosti v Kostromskoi gubernii; sbornik dokumentov, 1917-1919 gg. Kostroma, Kostromskoe knizhnoe izd-vo, 1960. 223 p. (MIRA 14:5)

1. Kostroma (Province) Upravleniye vnutrennikh del. Arkhivnyy otdel.
2. Nachal'nik Gosudarstvennogo arkhiva Kostromskoy oblasti (for Kolbasov)
3. Nachal'nik Arkhivnogo otdela Upravleniya vnutrennikh del Kostromskogo oblispolkoma (for Makarov)
4. Arkhivnyy otdel Upravleniya vnutrennikh del Kostromskogo oblispolkoma (for Shepeleva, Lyamina)
(Kostroma Province--Works councils)
(Kostroma Province--Industries)

MAKAROV, A.S.

History of the geologic development of the northeastern Chatkal
Range in the middle Paleozoic. Trudy. Uz.geol.upr. no.1:79-86
'60. (MIRA 14:8)

(Chatkal Range--Geology)

MAKAROV, A.S., inzh.

Meeting of the workers of the State Trust for the Organization and Efficiency of Electric Power Plants for the exchange of experience in the field of automatic control of thermal electric power plants. Energetik 10 no.1:37-38 Ja '62.

(MIRA 34.12)

(Electric power plants--Congresses)

(Automatic control--Congresses)

MAKAROV, A. S., Doc VET SCI, "TYPES OF HIGHER NERVOUS
ACTIVITY AND ^{the} REACTIVITY OF HEALTHY AND INJURED DOGS."
OMSK, 1961. (MIN OF AGR RSFSR. OMSK VET INST). (KL-
DV, 11-61, 226).

SUMETSKIY, I.Sh., gornyy inzh.; MAKAROV, A.S., gornyy inzh.

Compressed air pressure regulators for pneumatic rock drill
mountings. Gor.zhur. no.10:49-51 O '60. (MIRA 13:9)

1. Zavod "Pnevmatika", Leningrad.
(Rock drills) (Pressure regulators)

1. MAKAROV, A. R.: VOL'PE, A. S.: KENIGSBERG, K. Ya.

2. USSR (600)

4. Burns and Scalds

7. Gas metabolism in cases of burns. Novosti med. no. 24, 1951

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

L 1416-66
ACCESSION NR: AP5020415

electronic components are embedded in or attached to the surface of a semiconductor crystal, which is a system of n-p junctions of a specified geometry. In molecular electronics the fundamental units are designed on the bases of the magnetic and electric fields, of the spin and interaction values of the voltage field, and of the charges inside the crystal lattice. The Seebeck, Peltier, and Hall effects are used in this work. Molecular electronics permits a component density 100 times greater than that of solid circuits. Reliability can be greatly enhanced in several ways, particularly by the duplication of components. Micro-electronics repair is accomplished by unit replacement. In the USA, \$778,000,000 will be spent on microminiaturization of devices, and nearly 50% of the military equipment will be so constructed by 1970. Orig. art. has: 2 tables and 5 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC, GO

NO REF SOV: 000

OTHER: 000

Card 2/2

DP

L 1416-66 EWT(1)/EWA(h)
 ACCESSION NR: AP5020415

UR/0375/65/000/008/0070/0076

AUTHOR: Makarov, A. P. (Engineer, Lieutenant colonel)

TITLE: Microelectronic elements in marine automatic equipment

SOURCE: Morskoy sbornik, no. 8, 1965, 70-76

TOPIC TAGS: microminiaturization, electronic circuit, marine engineering, molecular electronics, solid state circuit, semiconductor device

ABSTRACT: A review of the foreign progress in miniaturization of electronic circuits is presented. To provide increased reliability, to save cost, size, weight, and to accelerate development work, electronic construction evolved from separate production of each element to unit construction of subassemblies, while semiconductor devices replaced tubes. Today, much construction is based on thin film and solid (integral) circuits, and microminiaturization will be further extended by the development of molecular electronics. In the thin film circuits, 200-500 Å layers of metal, dielectric, and insulating materials are alternately deposited on ceramic or glass bases. The deposition can be done by thermal vaporization, by cathode sputtering, or by electromechanical plating. The greatest difficulty stems from the fact that transistors, diodes, and high-rated capacitors for inductance cannot be included in the film. In the solid circuits the

Card 1/2

38
B

L 2385-66

ACCESSION NR: AP5021431

ENCLOSURE: 01

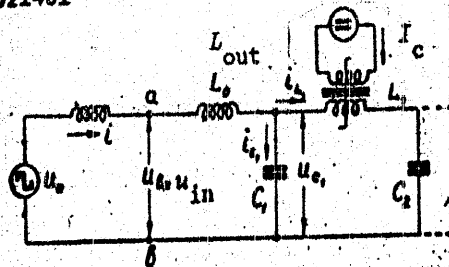


Fig. 1. Equivalent circuit of frequency multiplier with input stage of magnetic pulse generator: L_0 and C_1 --inductance coil and condenser for the charging circuit; L_1 --switching choke with core made of a material with rectangular hysteresis loop; C_2 --capacitor for the second section; the indicated voltages across and currents through these elements are the instantaneous values; I_c --constant magnetizing current for asymmetric operation of the generator.

BVH
Card 3/3

L 2385-66

ACCESSION NR: AP5021431

input and the no-load voltage across the multiplier, and that this difference increases as $a = \frac{L_{out}}{L_{out} + L_0}$ is increased. A maximum power factor is reached at a maximum

value of L_{out} where $a = 1$. The inductive output impedance of the frequency multiplier is compensated by resonance in this type of circuit, which increases the power yield. Thus the equivalent power factor which characterizes the load across the voltage source is independent of L_{out} and is equal to 0.9 at resonance. Orig. art. has: 2 figures, 12 formulas.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: 02Nov64

ENCL: 01

SUB CONC: EC

NO REF SOV: 002

OTHER: 002

Card 2/3

L 2385-66 EWT(1)
 ACCESSION NR: AP5021431

UR/0146/65/008/004/0009/0014
 621.373

AUTHOR: Makarov, A. P.

TITLE: Magnetic pulse generator with frequency multiplier

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 4, 1965, 9-14

TOPIC TAGS: pulse generator, frequency multiplication, circuit design, pulse recurrence

ABSTRACT: The author examines the problem of using frequency multipliers with a single-phase input to increase the prf of magnetic pulse generators which have transformer cores made of a material with rectangular hysteresis loop. The operation of this type of generator is analyzed by substituting an equivalent circuit consisting of a source of voltage u_0 and a series connected coil with inductance L_{out} (see fig. 1 of the Enclosure). Formulas are given for the design parameters of this circuit and graphs are plotted showing u_0 , i and u_{in} as functions of time. It is found that there is a considerable difference between the voltage at the generator

Card 1/3

30
 29
 B

MAKAROV, A.P.

Contribution of veterinary specialists to the development of
animal husbandry in Nerekhta District. Veterinariia 38 no.2:
12-16 F '61. (MIRA 18:1)

1. Glavnyy veterinarnyy vrach Nerekhitskogo rayona, Kostromskoy oblasti.

KRASNOV, V.S.; KASHEKOV, L.Ya., kand. tekhn. nauk; NOVIKOV, G.I.,
kand. tekhn. nauk; MAKAROV, A.P., kand. tekhn. nauk;
GALDIN, M.V., inzh.; KOROLEV, V.F., kand. tekhn. nauk;
PERCHIKHIN, A.V., inzh.; FADEYEV, N.N., inzh.; ROZIN,
M.A., red.; DEYEVA, V.M., tekhn. red.

[Mechanization of production processes on livestock farms]
Mekhanizatsiia proizvodstvennykh protsessov na zhivotno-
vodcheskikh fermakh. Izd.5., ispr. i dop. Moskva, Sel'-
khozizdat, 1963. 478 p. (MIRA 17:2)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokho-
zyaystvennykh nauk imeni V.I. Lenina (for Krasnov).

CHURIN, Kh.D., kand. sel'khoz. nauk, dots.; VASIL'YEV, B.M., dots.;
BELOV, A.I., kand. ekon. nauk; ASHIRYAYEV, Sh.V., dots.;
TSYPKIN, G.I., kand. sel'khoz. nauk; KAPLINA, G.T., dots.;
ANDRONOV, I.G., dots.; VASIL'YEV, V.I.; KONDION, A.K.;
MAKAROV, A.P., nauchnyy sotr.; ZHIZNEVSKIY, F.V., red.;
MOSIYASH, S.P., red.; KRINITSKIY, V.A., red.; NAGIBIN, P.,
tekhn. red.

[Economics of Kazakhstan agriculture] Ekonomika sel'skogo kho-
ziaistva Kazakhstana. Alma-Ata, Kazsel'khozgiz, 1962. 325 p.
(Kazakhstan--Agriculture--Economic aspects) (MIRA 16:3)

KLIMOV, N.M.; BUTRIMENKO, V.P.; VSYAKIKH, A.S., prof.; LITOVCHENKO,
G.R.; KOLOBOV, G.M.; KOZHEVNIKOV, Ye.V.; ALIKAYEV, V.A.;
KRASNOV, V.S.; MAKAROV, A.P.; GRIGOR'YEV, Ye.P., red.;
ROZIN, M.A., red.; GUREVICH, M.M., tekhn. red.

[Animal husbandry] Zhivotnovodstvo. Moskva, Sel'khozgiz,
1959. 477 p. (MIRA 16:3)
(Stock and stockbreeding)

MAKAROV, A. P., inzh.

Electric power utilization in grinding grain for feed. Nauch. trudy
VIESKH 4:21-57 '59. (MIRA 13:11)
(Feed mills)

PERCHIKHIN, Abram Vladimirovich, inzh.; KRASNOV, V.S.; KASHEKOV, L.Ya.,
inzh.; NOVIKOV, G.I., kand.tekhn.nauk; MAKAROV, A.P., inzh.;
GALDIN, M.V., inzh.; KOROLEV, V.F., kand.tekhn.nauk; FATEYEV,
Ye.M., doktor tekhn.nauk; FADEYEV, N.N., inzh.; ROZIN, M.A.,
red.; GUREVICH, M.M., tekhn.red.

[Mechanization of heavy work on livestock farms] Mekhanizatsia
trudoemkikh rabot na zhivotnovodcheskikh fermakh. Izd.4., ispr.
i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 447 p.

(MIRA 13:10)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystven-
nykh nauk imeni V.I.Lenina (for Krasnov).

(Stock and stockbreeding)

(Farm mechanization)

ROGOZIN, G.M.; TSYNKOV, M.Yu., kand. sel'skokhozyaystvennykh nauk; LOBANOVA, A.A., kand. sel'skokhozyaystvennykh nauk; HUMYANTSEVA, T.V.; TRUDOLYUBOV, B.A., kand. sel'skokhozyaystvennykh nauk; KUDRYAVTSEV, P.N., doktor sel'skokhozyaystvennykh nauk; LITOVCHENKO, G.R., kand. sel'skokhozyaystvennykh nauk; KOLOBOV, G.M.; IOFE, M.Sh.; KHITENKOV, G.G., doktor sel'skokhozyaystvennykh nauk; BADIR'YAN, G.G., doktor sel'skokhozyaystvennykh nauk; IVANOVA, A.A.; MAKAROV, A.P.; ALTAYSKIY, I.P.; SPIRIDONOV, A.L., kand. sel'skokhozyaystvennykh nauk; ZHUYKOV, G.G.; BANNIKOV, N.A., red.; IVANOVA, A.N., red.; ZUBRILINA, Z.P., tekhn. red.

[Economics and organization of stockbreeding on collective farms]
Ekonomika i organizatsiia zhivotnovodstva v kolkhozakh, Moskva,
Gos. izd-vo sel'khoz. lit-ry, 1958. 550 p. (MIRA 11:7)
(Stock and stockbreeding)

MAKAROV, A.P.
 BREMER, G.I., doktor tekhn.nauk, prof.; GALDIN, M.V., inzh.; DEMIN, A.V.,
 kand.tekhn.nauk; ZYABLOV, V.A., kand.tekhn.nauk; KAPLUNOV, M.M.,
 inzh.; KASHKOV, L.Ya., inzh.; KOROLEV, V.F., kand.tekhn.nauk;
 KRASNOV, V.S.; KULIK, M.Ye., kand.tekhn.nauk; ~~MAKAROV, A.P.~~, inzh.;
 NOVIKOV, G.I., kand.tekhn.nauk; NOSKOV, B.G., inzh.; OLENEV, V.A.,
 kand.vet.nauk; OSTANKOV, V.P., inzh.; PERCHIKHIN, A.V., inzh.;
 POKHVALENSKIY, V.P., kand.tekhn.nauk; SERAFIMOVICH, L.P., kand.
 tekhn.nauk; SMIRNOV, V.I., kand.tekhn.nauk; URVACHEV, P.N., kand.
 tekhn.nauk; FADEYEV, N.N., inzh.; FATEYEV, Ye.M.; KRYUKOV, V.L.,
 red.; VESKOVA, Ye.I., tekhn.red.

[Reference book on the mechanization of stock farming] Spravochnaia
 kniga po mekhanizatsii zhivotnovodstva. Moskva, Gos.izd-vo sel'khoz.
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1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh
 nauk im. V.I.Lenina (for Krasnov, Fateyev).
 (Farm equipment) (Stock and stockbreeding)

MAKAROV, Aleksey Pavlovich; BEGESHEV, Gusman Gusmanovich; MAZARENKO, L.I.,
redaktor; NACIBIN, P.A., tekhnicheskiiy redaktor

[Experience with pasture reclamation in Muyun-Kum] Opyt pastbishchnogo
osvoeniia Muyun-Kumov. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 53 p.
(Muyun-Kum--Pastures and meadows) (MLRA 10:8)

MAKAROV, Aleksey Pavlovich, nauchnyy sotrudnik; SAVICH, M.P., redaktor;
ZLOBIN, M.V., tekhnicheskiiy redaktor

[The right use of pastures] Pravil'noe ispol'zovanie pastbishch.
Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 28 p. (MLRA 9:10)

1. Institut kormov i pastbishch Kazakhskogo filiala Vsesoyuznoy
Akademii sel'skokhozyaystvennykh nauk im. Lenina (for Makarov)
(Pastures and meadows)
(Sheep--Feeding and feeding stuffs)

Makarov, Andrey Pavlovich

EDP
.R92689

Mekhanizatsiya Prigotovleniya Kormov
(Mechanization of Fodder Preparation)

Moskva, Sel'Khozgiz, 1955.

287 P. Diags., Tables.

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MAKAROV, A.P., inzhener.

Mechanization of time-consuming work in animal husbandry. Met. v
shkole no.4:17-27 J1-Ag '54. (MLRA 7:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii
sel'skogo khozyaystva.
(Stock and stock breeding) (Agricultural machinery)

MAKAROV, A. P.

Mekhanizatsiia pri gotovlenii barrov (Mechanization of food preparation).
Moskva, Bel'khoziz, 1974, 221 p.

SO: Monthly List of Russian Acquisitions, Vol. 7, No. 7, Oct. 1974

MAKAROV, A. P.

Pastures - Kazakhstan

Principles of pastureland rotation in the desert region of southeastern Kazakhstan. Vest. AN Kazakh SSR 10 no. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

MAKAROV, AP. *Alksy Pavlovich*

Sheep

Correct utilization of meadows by progressive shepherds of Kazakhstan. Korm.
baza 3 no. 3, 1952

Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.

MAKAROV, A.P.

[~~Fodder~~ resources of the Kyzyl-Kum desert] Kormovye resursy Kyzyl-Kumov. Alma-Ata, Kazakhskoe gos. izd-vo, 1951. 44 p. (MLRA 10:3)
(Kyzyl-Kum--Pastures and meadows)

MAKAROV, A.P.

Treatment of closed fractures of the external malleolus in the light of anatomical characteristics of the inferior tibiofibular articulation. Vest.khir. no.8:63-71 '61. (MIRA 15:3)

1. Iz kafedry operativnoy khirurgii (nach. - prof. A.N. Maksimenkov) Voenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova i travmatologicheskogo otdeleniya (nach. - kand. med.nauk G.G. Slovetkiy, nauchn. rukovod. - prof. I.L. Krupko) Leningradskogo okružhnogo voyennogo gosпитalya.
(ANKLE BONE--FRACTURE)

MAKAROV, A.P.

Chronic cholecystitis in children and its treatment at the
Yessentuki health resort. Pediatriia 38 no.2:35-40 F '60.
(MIRA 13:12)
(GALL BLADDER--DISEASES)
(YESSENTUKI--THERAPEUTICS, PHYSIOLOGICAL)

MAKAROV, A.P.; PANKOVA, V.A.

Case of spontaneous exit of a foreign body from the respiratory tract with perforation of the thoracic wall. Sov.med. no.2:38-39 F '54. (MLRA 7:1)

1. Iz Yessentukskey ob'yedinennoy goredskoy detskoy bol'nitsy (glavnyy vrach A.S.Vasil'yeva).
(Respiratory organs--Foreign bodies)

MAKAROV, A.P.

~~Alcoholnovocain~~ anesthesia in the therapy of closed fracture of
the ankle. Vest.khir. 70 no.2:46-60 F '50. (CLML 19:3)

1. Of Leningrad Okrug Military Hospital (Head Surgeon -- Ya.A.Bok).

MAKAROV, A.P.

VAS'KOVSKIY, S.A.; GUTMAN, R.A.; KULAGIN, I.K.; MAKAROV, A.P.

Application of automatic seam welding in the railroad car
industry. Zhel. dor. transp. 38 no.11:28-31 N '56. (MLRA 9:12)

(Car wheels--Welding)

VORONTSOV-VIL'YAMINOV, Boris Alaksandrovich; KRASNOGORSKAYA, Alisa
Arkad'yevna; Prinimali uchastiye: TSITSIN, F.A.; PONOMAREVA,
G.A.; MAKAROV, A.N.; KUKARKIN, B.V., prof., otv.red.;
YERMAKOV, M.S., tekhn.red.

[Morphological catalog of galaxies. Part 1. Catalog of 7,200
galaxies with declinations from 90 to 45] Morfologicheskii
katalog galaktik. Chast' 1. Katalog 7200 galaktik ot
90 do 45 skloneniia. Moskva, Izd-vo Mosk.univ., 1962.
205 p. (Moscow. Universitet. Gosudarstvennyi astronomicheskii
institut. Trudy, vol.32). (MIRA 16:2)
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DROZDOV, V.K.; MAYOROV, O.N.; BELOV, Yu.S.; RUNOV, Yu.N.; MAKAROV, A.N.

Formation of stationary waves on pneumatic tires at high rolling
speeds. Kauch.i rez. 19 no.12:40-44 D '60. (MIRA 13:12)

1. Yaroslavskiy shinnyy zavod.
(Tires, Rubber--Testing)

MAKAROV, A.N.

Investigations of the structure and composition of coal-bearing
formations according to logging data. Vest. LGU 19 no.24:60-68
'64 (MIRA 18:1)

MAKAROV, A. N.

Use of gamma-gamma logging in tin and complex metal deposits
of the southern Maritime Territory. Vest LGU 19 no. 6:148-151
'64. (MIRA 17:5)

SEMENOV, A.S.; PETROVSKIY, A.D.; SVIYAZHENINOV, F.I.; MAKAROV, A.N.;
VEKSLER, V.I.; KHARLAMOV, I.P.

Electric prospecting operations in studying deep-seated sulfide
veins. Uch.zap.LGU no.303:203-221 '62. (MIRA 15:11)
(Sulfides) (Electric prospecting)

MAKAROV, A.N.

Instruments used in agriculture. Priborostroenie no.9:14-16
S '61. (MIRA 14:9)
(Agricultural research) (Instruments)

MAKAROV, A.N.

Method of resistivity logging and its place in the complex of
logging operations conducted in exploring coal deposits. Uch. zap.
LGU no.286:63-86 '60. (MIRA 14:3)
(Electric prospecting) (Coal)

MAKAROV, A.N.

Use of neutron-gamma logging in coal deposits. Uch. zap. LGU
no.278:109-118 '59. (MIRA 13:2)
(Prospecting--Geophysical methods) (Coal geology)

MAKHAROV, A.N.; FRISH, V.F.; DOROTA, P.P.

New method for logging boreholes in lignite deposits. Trudy
VITR no.1:341-356 '58. (MIRA 12:1)
(Logging (Geology)) (Lignite)

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"New Methods in Borehole Logging of Brown Coal Deposits"

(New Developments in the Methods and Techniques of Geological Exploration)
Leningrad, Gostoptekhnizdat, 1958. 423 p. (Series: Its: Sbornik trudov I)

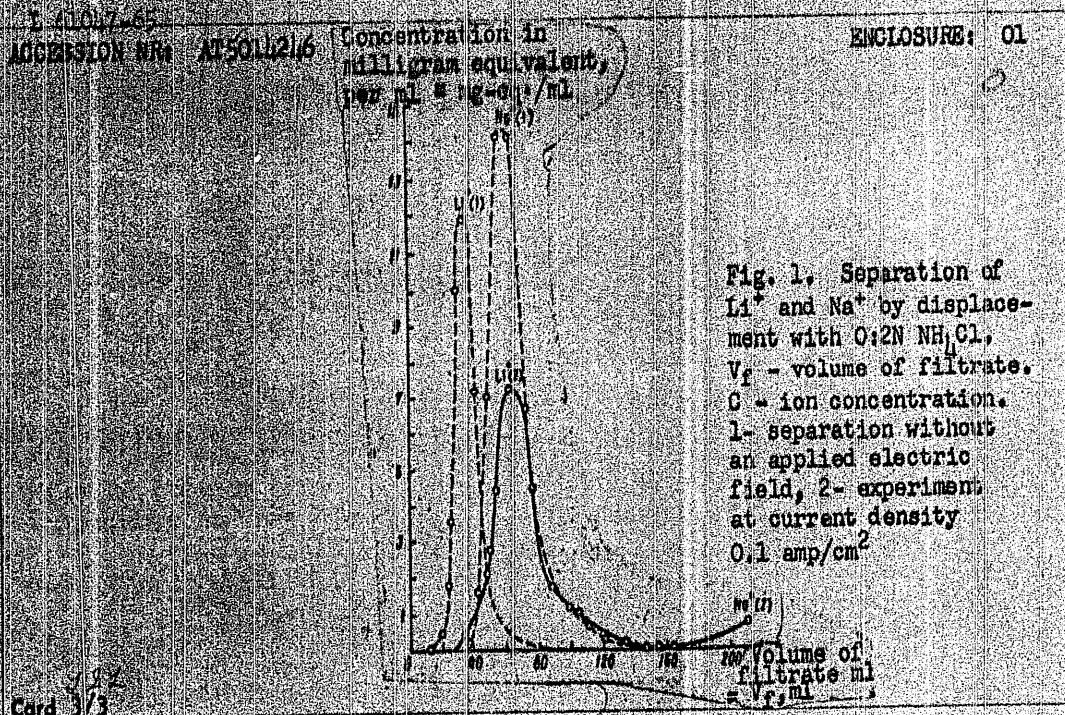
MAKAROV, A. N. (Leningrad)

"Über die Arbeiten des Zentrallabors fuer Automatik auf dem Gebiet der Automatischen Regelung des Hochofenganges.

report presented at a meeting of the German Society of Miners and Metalworkers, Leipzig 14-15 Nov 1957.

Cent. Lab. of Automations.

Stahl und Eisen, No. 5, 1958.



1 61047-65

ACCESSION NUM: AT5034246

selected such that the slowest ions bear the greatest similarity to the ions of the cation exchange resin. Orig. art. has: 1 table and 5 graphs.

ASSOCIATION: none

SUBMITTED: 26Feb65

EWIL: 01

SUB CODE: IC, GC

NO REF SOV: 003

OTHER: 002

Card 2/3

Y 61047-65 EWT(m)/EWG(m)/EWP(x)/WPC(b) WPF(c) DG/JD/GS/RM
 ACCESSION NR: AT5014246 UR/0000/65/000/000/0063/0066

AUTHORS: Shabanov, A. A.; Gershko, V. I.; Panchenkov, O. M.; Makarov, A. ³²

TITLE: Separation of sodium and lithium ions in a cation exchange resin by the method of electrochromatographic displacement

SOURCE: AN SSSR, Institut fizicheskoy khimii, Ionobmennaya tekhnologiya (Ion exchange technology), Moscow, Izd-vo Nauka, 1965, 63-66

TOPIC TAGS: ion exchanger, ion exchange, ion exchange resin, sodium ion, lithium ion, chromatography/Dowex 50 cation exchange resin

ABSTRACT: The purpose of the investigation was to determine optimum condition for the separation of Na and Li by the method of electrochromatographic displacement. The experimental procedure was similar to that of K. S. Spiegler and G. D. Coryell (J. phys. chem., 56, 106, 1952). The displacement of the Na⁺ and Li⁺ zones was carried out in NH₄ solution, whereas the elution was conducted in a cation exchanger saturated with Cd²⁺. The cation exchange resin used was Dowex-50, 200 mesh in 8% divinylbenzene. The experimental results are shown graphically (see Fig. 1 on the Enclosure). It is concluded that for best results the ions must be

Card 1/3

4,500 copies printed.

Sponsoring Agencies: USSR, Glavnoye upravleniye po ispol'zovaniyu
atomnoy energii, and Akademiya nauk SSSR.

Editorial Board of Sets: V. I. Dikuhin, Academician (Resp. Ed.), N. M.
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Ed.), L. A. Gerasimov, B. I. Varkhovskiy, S. G. Muravov, L. I. Petech
(secretary).

COVERAGE. This collection of papers covers a very wide field of the study of materials and processes. The papers are divided into the following sections: (1) Tracer methods in industrial radioisotope techniques. The topic of this volume is the research and development of the application of radioisotope techniques in the machine and instrument-manufacture industry. The individual papers discuss the applications of radioisotope techniques in the study of problems of friction and lubrication, the study of cutting, engine performance, and defects in service. (2) Counting and detection methods. (3) Radioisotopes in the production of industrial processes, recording and measuring devices, radiation control, flowmeters, level measuring contributions of various countries, etc. These papers are written by authors from various Soviet scientific laboratories. They were published as Proceedings of the All-Union Conference on the Use of Radioisotopes in the Industry and Agriculture, held in the National Research and Stable Isotopes and Radiation in the National Academy of Sciences, USSR, in the USSR Academy of Sciences, Moscow, and Science, April 1-10, 1957. No personal data were mentioned.

[illegible]

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Takayama, M., and A. Katsukawa. Institut field Akademi Tsukuba, Japan. Study of the Production of Radioactive Isotopes of Barium and Strontium by the Cosmic-ray Neutrons in the L'Arveyan SPR. Consideration of the Cosmic-ray Signal Statistics in Recording Radioactive Radiation with Relay-type Instruments 241

Trakhsen, V.K., V.V. Lyndin, S.V. Medvedev, Yu. S. Plischn, L.K. Zelenko, and A. S. Souda (Institut uskalyovaniya i fiziki reaktorov, VNIIE). Problems in Designing Gamma-Ray Level Indicators 247

Ovchinnik, Ya.Ya. (Konstruktorskoye byuro "Navelemektronika",
NPP SSSR - Design Engineering Office of "Navelemektronika, USSR).
Use of Scintillation Counters With Electron Modulation for Gamma
Radiation Recording 259

Shcherbakov, K.K., and V.A. Yanushkovskiy (Institut fiziki AN Latvii-
SSR - Institute of Physics, Academy of Sciences, Latvian
SSR). Portable Radioactive Level Indicators 255

B-1k. Ye.A. Level Indicator for Free-flowing Materials 258

VERKHOVSKIY
BOGACHEV, A.M.; VERKHOVSKIY, B.I.; MAKAROV, A.N.

Radioactive thickness gauges for measuring rolled steel. Zav. lab.
21 no. 7:813-820 '55. (MLRA 8:10)

1. Fizicheskiy institut imeni P.N. Lebedeva Akademii nauk SSSR i
TSentral'naya laboratoriya avtomatiki Ministerstva chernoy metal -
lurgii SSSR
(Measuring instruments) (Radioisotopes--Industrial applications)

Handwritten: 40
BOGACHEV, A.M.; VERKHOVSKIY, B.I. ; MAKAROV, A.N.

Theory of radioactive methods used for measuring thickness. Zav.
lab.21 no.7:808-812 '55. (MIRA 8:10)
(Measuring instruments) (Radioisotopes--Industrial applications)

MAKAROV, A. M.

F-PM

L4038 AEC-tr-2435 (Pl. 3) (p. 105-14)

MEASURING THICKNESS AND DENSITY BY MEANS OF

RADIOACTIVE ISOTOPES. A. M. Bogachev, B. I.

Verkhovsky (Verkhovskii), and A. N. Makarov. p. 105-14

of CONFERENCE OF THE ACADEMY OF SCIENCES OF

THE USSR ON THE PEACEFUL USES OF ATOMIC ENERGY

JULY 1-6, 1955. SESSION OF THE DIVISION OF TECH-

NICAL SCIENCE. (Translation). 10p.

This paper was originally abstracted from the Russian
and appeared in Nuclear Science Abstracts as NSA 9-7805.

PM

MAKAROV, A.N.; SHERMAN, M.Ya.

[Calculation of throttle valves for measurement and control] Raschet izme-
ritel'nykh i reguliruiushchikh drossel'nykh ustroistv. Moskva, Gos. nauchno-
tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 283 p.
(MLBA 6:9)
(Valves)

ACC NR: AP6021986

monitoring of the flights are his responsibility as is reducing pilot error. Beyond this he should not interfere with aircraft handling, for it reduces the pilot's confidence. He must encourage young pilots, be ready to help in unforeseen difficulties, and if possible, foresee them. He should keep pilots well informed as to weather conditions and changes. Finally, he should make a critique of the actions of the launch detail, both as to quality of control and errors of omission and commission, to eliminate these in the future.

SUB CODE: 415/SUBM DATE: None

Card 2/2

ACC NR: AP6021986

(A)

SOURCE CODE: UR/0375/66/000/004/0050/0056

AUTHOR: Makarov, A. M. (Colonel; Military Pilot 1st Class)

ORG: None

TITLE: Flight support and control

SOURCE: Morskoy sbornik, no. 4, 1966, 50-56

TOPIC TAGS: pilot training, ground crew training, training procedure, aircraft control equipment, flight control system

ABSTRACT: The commander of the flight launch detail must select only the very best trained people for this important function and the launch detail must be trained in accordance with a plan compiled by the Flight Control Officer to include training objectives, study, drills and responsible personnel. Four or five hours of preliminary preparations should cover flight conditions, plane crew missions, coordination with support subunits, discussion of past blunders, strict review of in-flight procedures, etc. Preflight preparations by the Flight Control Officer, ending 30 minutes before the first aircraft takes off, include study of weather conditions and establishment of local conditions such that crews can carry out planned exercises to the greatest advantage. He must know where each aircraft is, adhere to a schedule, and act decisively. Radar procedures, checks, and radio

Card 1/2

L 29810-66

ACC NR: AP6012686

on the plane surface of a liquid. The laws of conservation connecting the flow parameters before and after the jump are written in the form:

$$\rho_1 c_{1n} = \rho_2 c_{2n}, \quad (1)$$

$$\rho_1 + \rho_1 c_{1n}^2 = \rho_2 + \rho_2 c_{2n}^2, \quad (2)$$

$$c_{1t} = c_{2t}, \quad (3)$$

$$\frac{c_1^2}{2} + i_1 = \frac{c_2^2}{2} + i_2 + q. \quad (4)$$

Subscript 1 refers to quantities which characterize the flow before the condensation jump; subscript 2 to quantities after it. The results of the mathematical treatment are claimed to be applicable to design of vapor-liquid injectors and to calculation of the fuel feed for liquid rocket engines. Orig. art. has: 13 formulas and 2 figures.

SUB CODE: 20 / SUBM DATE: 17Apr65/ ORIG REF: 003/ OTH REF: 002

Card 2/2 fv

L 29810-66 ENT(1)/ENT(a) WY/JW

ACC NR: AP6012686

SOURCE CODE: UR/0170/66/010/004/0545/0547

AUTHOR: Makarov, A. E.; Martinson, L. K.ORG: N. E. Bauman Upper Technical School, Moscow (Vyssheye
tekhnicheskoye uchilishche im. N. E. Baumana)TITLE: Diagonal jump with complete condensationSOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 4, 1966, 545-547TOPIC TAGS: vapor condensation, turbulent heat transfer

ABSTRACT: The article considers the problem of an oblique condensation jump, under the assumption that the condensation coefficient is equal to unity. Such a formulation of the problem follows, for example, from a consideration of the physical processes taking place in an element of surface of a cavity formed during the flow of vapor into a space filled with relatively cold liquid. It is assumed that the heat of condensation is given up by the vapor to the liquid and is completely removed from the condensation boundary by the stream of liquid. Thus, the concept of a "condensation jump" takes in a relatively broad layer within which there takes place turbulent transfer of heat to the liquid. The article considers the case of a homogeneous stream of vapor falling at an angle

Card 1/2

UDC: 536.423.4

[illegible]

Days of increasing spruce and fir on the local spruce
nepheline and dressing plant of the "spruce" - continue. (11.11.11)
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I 65080-65 57(m)/TNA(h)/EIP(h)/EIP(t) JD

ACCESSION NR: AP5021985

UR/0286/65/000/014/0059/0059
621.365.69.013 : 534.8.004

AUTHOR: Kisilev, M. I.; Makarov, A. M.; Pochtikov, V. A.

4/
3TITLE: A method for heating electrically conductive materials. Class 21,
No. 172926

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 59

TOPIC TAGS: magnetic field, electric conductivity, heating, magnetic effect,
ultrasonic effect, ultrasonic vibrationABSTRACT: This Author's Certificate introduces: 1. A method for using a magnetic field to heat electrically conductive materials. The heating is intensified by excitation of ultrasonic oscillations in the material being heated in a direction perpendicular to the lines of force of the magnetic field. 2. A modification of this method in which residual stresses are eliminated in the material being heated by removing the magnetic field before killing the ultrasonic oscillations.ASSOCIATION: none
SUBMITTED: 01Nov63
NO REF SOV: 000
Card 1/1ccENCL: 00
OTHER: 000

SUB CODE: EM

МАШИНЫ, А.В., 1965.

Conference of the present state and prospects of expanding
working in the transportation machinery industry. Svar.
prolyz. no. 7:44-45 Ji 165. (KIRB 1238)

Automated welding on a salient work surface

S/135/62/000/011/004/006
A006/A101

inclination is regulated. The attachment was used for automatic welding of a longitudinal seam on an undulated AMr 5 B (AMg5V) alloy pipe, 2.5 mm thick. The welding conditions were: 120 - 130 amps current; 3 mm electrode diameter; 16 m/hr welding speed; diameter of the filler wire 2 mm; argon consumption 520 l/hour. The results obtained are being introduced at a plant in the Kuybyshev sovnrarkhoz. There are 6 figures.

X

Card 2/2

1.2300

41884

S/135/62/000/011/004/006
A006/A101

AUTHORS: Dudar', L. A., Engineer, Makarov, A. M., Technician, Grishin, I. S.,
Engineer

TITLE: Automated welding on a salient work surface

PERIODICAL: Svarochnoye proizvodstvo, no. 11, 1962, 31 - 32

TEXT: An experimental investigation was made of automated argon-arc welding with a non-consumable electrode on a salient surface with a low radius of curvature. Welding in such a case is only possible if the inclination angle of the electrode will be varied by the torch. It must also be taken into account that the motion of the electrode and of the welding machine carriage are different, and that therefore the welding speed is greater on a curved than on a straight section. An attachment for the automatic AICB-1 M (ADSV-1M) machine was developed with a duplicating roll connected to the welding torch and a special pickup. The torch can be brought into a perpendicular position to the surface and the electrode is automatically maintained along the normal toward the welding surface. The arc length remains constant, and the speed of the torch

Card 1/2

KAPLUN, Fayvel' Shmylovich; GALLE, Aron Grigor'yevich; MAKAROV,
Anatoliy Matveyevich; NOZDRIN, Aleksandr Andreyevich;
PLATOV, V.G., inzh., retsenzent; PAVLOV, V.V., inzh.,
retsenzent; TKACHENKO, A.A., inzh., red.; KHITROV, P.A.,
tekhn. red.

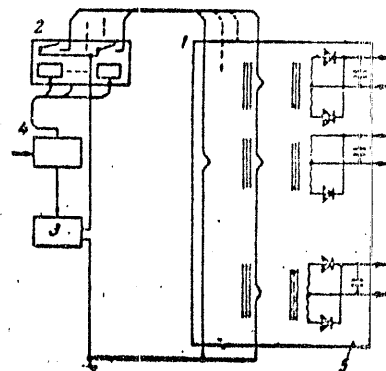
[Manual on containers and the packing of freight] Spravochnik po tare i upakovke грузов. Moskva, Transzheldorizdat,
1961. 393 p. (MIRA 15:7)
(Packing for shipment)

MAKAROV, Anatoliy Matveyevich; TSARENKO, A.P., red.; BOBROVA, Ye.N., tekhn.red.

[Intensified loading of timber into railroad cars] Uplotnennaya
zagruzka vagonov lesomaterialami. Moskva, Gos.transp.zhel-dor.
izd-vo, 1959. 58 p. (MIRA 12:6)
(Loading and unloading) (Lumber--Transportation)

ACC NR: AP7001383

Fig. 1. 1 - core matrix; 2 - distributor;
3 - readout shaper; 4 - control
device; 5 - rectifiers



Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 11Jun65

Card 2/2

ACC NR: AP7001383

(A,N)

SOURCE CODE: UR/0413/66/000/021/0054/0054

INVENTOR: Makarov, A. P.

ORG: none

TITLE: Permanent memory. Class 21, No. 187836

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 54

TOPIC TAGS: ferrite core memory, memory access technique

ABSTRACT: This Author Certificate presents a permanent memory of ferrite cores. It contains a core matrix, a distributor, a readout shaper, and a control device. To increase the power at the output of the device, it also contains rectifiers connected to the output windings of the cores (see Fig. 1). The shaper is in the form of a sinusoidal pulse generator.

Card 1/2

UDC: 681.142.07